

Attorney Docket No. 06618-891001
Application No. 10/064,500
Amendment filed November 21, 2003
Reply to Office Action dated August 22, 2003

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Claims 4 and 5 stand objected to based on the informality that the claims should be separated by paragraphs. This rejection is respectfully traversed. In fact, this application was filed through the Patent Office's "electronic filing system" (EFS). The version that was filed did in fact include paragraphs between the claims. A copy of the XML printout of the electronic version that was filed is attached. It can be seen from this copy that there are in fact spaces between the claims.

Claims 6 and 12 stand rejected under 35 USC 112, second paragraph, as allegedly being indefinite. In response, these claims are amended herewith for indefiniteness.

Claims 1-11, 13-17 and 21-27 stand rejected under 35 USC 102 as allegedly being anticipated by Baleras. Claims 1-2, 5-9, 11, 13-14, 16-17, and 21 stand rejected under 35 102(b) as allegedly being anticipated by Clevenger. The remaining claims stand rejected as either being obvious over Baleras, obvious over Baleras in view of Kub, obvious over Baleras in view of

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Estes, obvious over Baleras in view of Barmatz, or obvious over Baleras in view of Mino.

Initially, it is respectfully suggested that the Baleras document is not effective prior art, since its effective filing date is October 1999, wherein the subject matter in this patent application is fully disclosed in the parent application and in the provisional application filed April 22, 1999.

In any case, the Baleras document does not teach anything about the important claimed subject matter of "applying microwave energy to the first and second parts to bond the first substrate to the second substrate".

In fact, Baleras teaches substrate parts being placed together in figures 8 and 9. Meltable material is used. Once the meltable material is applied, Baleras describes that "the beads of meltable material, and possibly the entire structure, are then heated to a sufficient temperature to soften or melt the meltable material". It teaches nothing about doing this using microwaves. Admittedly, Baleras does describe that the semiconductor can be used for an ultra-high frequency converter once assembled. However, it never describes using microwave energy to melt the materials and thereby hold together the various structures.

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In fact, this goes against the established teaching in the art. Most people having ordinary skill in the art have believed that microwave energy, and especially microwave energy of this type, should not be used along with metal. In any case, nowhere does Baleras teach or suggest the claimed feature of "applying microwave energy... to bond the first substrate to the second substrate" as claimed. Column 4, lines 40-41, cited by the official action, simply show that figure 2, that is the assembled device, is itself used as a microwave chamber after assembly. It teaches nothing about assembling the chamber using microwave.

Therefore, claim 1 should be allowable for reasons discussed above, along with the claims which depend therefrom. Claim 11 defines "applying microwaves... to bond..." and should be allowable for similar reasons. Claim 21 defines microwave characteristics of the structure, and these characteristics are in no way taught or suggested by the cited prior art.

Therefore, it is respectfully suggested for these reasons that each of these claims should be allowable over Baleras.

Clevenger is similarly deficient, as it does not teach or suggest anything about bonding using microwave as claimed. Clevenger teaches solder balls, but the solder balls are apparently heated in a conventional way; in any case there is no

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teaching or suggestion of heating the solder balls using applied microwave energy.

Clevenger does teach that microwave should be used as a means for depositing the diamond layer, but teaches nothing about using the microwave for bonding substrates.

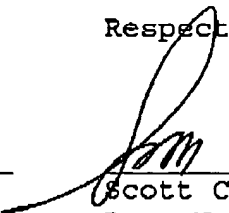
Finally, for reasons noted above, it is also respectfully suggested that Clevenger is not proper prior art, as again Clevenger does not have a filing date that preceeds the present filing.

This should destroy the Patent Office's prima facie showing of unpatentability, and therefore, for these reasons, it is respectfully suggested that each of the claims should be in condition for allowance. A formal notice to that effect is therefore respectfully requested.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 11/21/03



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